Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-34 (canceled)

Claim 35. (currently amended) A method of forming an analyte detection sensor on a substrate, the method comprising:

forming a first conductive layer over the substrate;

forming a first insulating layer over the first conductive layer;

patterning and etching a sensor well in the first conductive layer and in the first insulating layer; and

forming a sensor material in the sensor well, wherein the sensor material has an electrical property that changes in the presence of an analyte, wherein the first insulating layer is not removed during the formation of the analyte detection sensor.

Claim 36. (currently amended) The method of claim 35 further comprising:

forming a second conductive layer over the first insulating layer, wherein the second conductive layer is not removed during the formation of the analyte detection sensor.

Claim 37. (previously presented) The method of claim 36 further comprising:

forming a passivation layer over the second conductive layer.

Claim 38. (previously presented) The method of claim 35 wherein:

the sensor material comprises regions of a nonconductive organic material and a conductive material.

Claim 39. (previously presented) The method of claim 35 wherein forming a sensor material in the sensor well further comprises:

applying a fluid to the sensor well using a jet system.

Claim 40. (previously presented) The method of claim 35 wherein the first conductive layer is a metal layer.

Claim 41. (previously presented) The method of claim 37 wherein the first conductive layer is formed on a second insulating layer, and the second insulating layer is formed on a polysilicon layer.

Claim 42. (currently amended) The method of claim 41 wherein the first and the second insulating layers are oxide layers; and the first and the second ~~and the third~~ conductive layers are metal layers.

Claim 43. (previously presented) The method of claim 41 wherein the passivation layer is a glass layer.

Claim 44. (previously presented) The method of claim 35 wherein the first conductive layer is coupled to preprocessing circuitry including an autozeroing amplifier that adapts out low frequency components of output signals from the sensor.

Claim 45. (currently amended) A method of forming an array of analyte detection sensors on a substrate, the method comprising:

forming a first conductive layer over the substrate;

forming a first insulating layer over the first conductive layer;

patterning and etching sensor wells in the first conductive layer and in the first insulating layer; and

applying compositions of sensor material in each of the sensor wells to form the sensors, wherein the sensor material has an electrical property that changes in the presence of an analyte, wherein the first insulating layer is not removed during the formation of the analyte detection sensor.

Claim 46. (currently amended) The method of claim 45 further comprising:

forming a second conductive layer over the first insulating layer, wherein the second conductive layer is not removed during the formation of the analyte detection sensor.

Claim 47. (previously presented) The method of claim 46 further comprising:

forming a passivation layer over the second conductive layer.

Claim 48. (previously presented) The method of claim 45 wherein:

the compositions of sensor material in each sensor well comprise regions of nonconductive organic material and conductive material.

Claim 49. (previously presented) The method of claim 45 wherein:

the sensor material in each sensor well having a different composition than the sensor material in every other one of the sensor wells.

Claim 50. (previously presented) The method of claim 45 wherein:

the sensor material in a subset of the sensor wells having the same composition of sensor material.